**SPRING 2025: CS5720 – NN &DL**

**In- Class programming Assignment- ICP6**

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GitHub Link: [RXB57940/ICP6: ASSIGNMENT ON ICP6](https://github.com/RXB57940/ICP6)

Video Link: [ICP6\_ASSIGNMENT\_VIDEO\_EXPLANATION](https://drive.google.com/file/d/1TtcEiZQrcWr_zTlQpbFnp9PdMdBTaO7p/view?usp=drivesdk)

1. Add one more hidden layer to autoencoder.

A screenshot of a computer program

Description automatically generated

Adding more hidden layer into the existing code.

A screenshot of a computer code

Description automatically generated

Working with a basic autoencoder model in keras for image reconstruction using the Fashion MNIST dataset and code setup for unsupervised learning, where we are training an autoencoder to encode and then decode the input data

A computer screen shot of a program

Description automatically generated

1. Do the prediction on the test data and then visualize one of the reconstructed version of that test data. Also, visualize the same test data before reconstruction using Matplotlib.

A screenshot of a computer program

Description automatically generated

Output:

A white background with black text

Description automatically generated

A comparison of images of a person

Description automatically generated

1. Repeat the question 2 on the denoisening autoencoder

A close-up of a white background

Description automatically generated

A computer screen shot of text

Description automatically generated

Output:

A black and white text

Description automatically generated

1. Visualizing test data using matplotlib.

A screenshot of a computer program

Description automatically generated

Output:

A close-up of a graph

Description automatically generated

A screenshot of a computer code

Description automatically generated

Output:

A graph of a training loss

Description automatically generated with medium confidence